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## **BIBLIOMETRIC ANALYSIS OF PUBLISHED LITERATURE ON TAXATION IN MALAYSIA, BASED ON SCOPUS DATABASE**

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### **ABSTRACT**

Taxation research has received considerable attention from many scholars, practitioners and policymakers across the globe. Many scholars have also conducted research on taxation in the Malaysian context. However, papers that track the trends of such research are scanty in the existing literature. The aim of this study is to review the trend and frequencies of published literature on taxation in Malaysia based on the Scopus database using the search term “Malaysia and tax”. The design of the study is bibliometric analysis. As of 23rd September 2020, a total of 88 documents were retrieved and analysed using Excel, Hazing's Publish or Perish and VOSviewer software. Based on the standard bibliometric indicators, this paper reports the research papers and source types, years and language of publications,

subject area, most active institutions, most active sources' titles, keywords, authorship, abstract, title analysis and citation analysis. Findings revealed that there is an increase in growth rate of literature on studies related to taxation in the Malaysian context from 1977 to 2020 published in the Scopus database. The publications reached an all-time peak in 2016 to 2017 but significantly dropped in 2018 and 2019 based on the data retrieved from the Scopus database. The findings further show that Universiti Teknologi MARA is the most influential institution with 18.18% of the total documents retrieved, followed by Universiti Utara Malaysia with 9.1% respectively. Additional findings of the study show that Advance Science Letters is the highest source title with 14.71% of the published documents. The finding also indicates that Adhikari, Derashid and Zhang (2006) are the most influential authors with 187 citations as at 23rd September 2020. The research is limited to the literatures published in Scopus database, other database were not covered in this study. Malaysian policymakers should provide more research grants to tax practitioners and academicians to increase the level of publications in this field.

**Keywords:** Bibliometric analysis, taxation, Malaysia, scopus database

## INTRODUCTION

Malaysia is considered an upper middle-income country which has progressed from a basic producer of raw materials in the 1970s to its current multi-sector economy. The Malaysian government attempted to achieve a relatively high-income status by year 2020 and gradually to increase the value added of production chain through attracting huge investments in services, knowledge-based industry and high technology (World Factbook, 2020). Previous administrations have made significant efforts to reduce dependence on exports through improvement in domestic demands. These efforts paid off through huge economic growth and development. The efforts also led to increase in the overall government revenue from many sources including taxation. Taxes play a significant role in the economic development of Malaysia. Report from world factbook (2020) show that taxes contributes about 16.4% of the Gross Domestic Product (GDP) of Malaysia based on 2017 estimate.

A Report from Central Bank of Malaysia (Bank Negara) also indicates that taxes constitute a vital portion of the overall government

revenue. For instance, based on 2016 estimates, corporate tax, goods and services tax and individual income tax contributed 33.0%, 17.3% and 4.1% of overall government revenue respectively (Bank Negara, 2017). This data demonstrates the significance of taxation in the Malaysian economy which led to many scientific analyses of the impact of taxation on economic, political and social growth of Malaysia by several scholars. Moreover, a lot of studies have been conducted on taxation in the Malaysian context since 1977. However, analysis of the trend of such studies with a view to identifying the areas covered and not covered, the most influential authors in the field, the most influential journals that published such studies, the years with high or low publications, is rare in the existing literature.

Thus, the central objective of this study is to review the trend and frequencies of published literatures on taxation in Malaysia, based on the Scopus database. This is with a view to identifying the areas covered and ignored, top Malaysian researchers and affiliated institutions with high publication in taxation, the language most used in tax publications in Malaysia and the most cited authors. This will enable identification of areas that needs improvement for potential researchers to investigate accordingly.

The paper is organized as follows: the preceding section explains the objectives of the current study, section two covers more details on the purpose of bibliometric analysis and the concept. Section three describes the methodology used in the study. Section four provides details of the findings and finally, section five discusses the findings and concludes the study.

## **LITERATURE REVIEW**

Bibliometric analysis is defined as a quantitative technique used in examining the development of a research field and knowledge structure based on the analysis of relevant and related publications (IGI Global, 2018). It is also defined by Pritchard (1969) as the application of statistics and mathematical approaches to articles, books and other medium of communications. Likewise, bibliometric analysis is considered as one of the popular methods in identifying the trend and movement of publications (Ahmi & Mohd Nasir, 2019). It is regarded as a quantitative approach using statistical apparatus to

analyse information and texts as well as published documents from identified database (Hall, 2011; Daim et al., 2006).

Additionally, bibliometric analysis is used in examining the quality and quantity of published information and to categorise the pattern and trends of a research domain (Sweileh et al., 2017). Equally, Ho (2007) describes bibliometric analysis as a quantitative tool that offers a descriptive analysis of published documents in a specific field, domain, period, country, or the combination of all. In their own contribution, Rusly et al. (2019) described bibliometric analysis as a logical approach in discovering more details regarding a published document which includes: frequency of keywords, authors' information and citation analysis. It is pertinent to note that many indicators are used in bibliometric analysis: type of publication, publication outlets, authors' affiliation, country where the documents originated and its h-index (Ahmi & Mohd Nasir, 2019).

Thus, these indicators constitute the analysis tools based on the available data extracted from the chosen database. Other studies reported additional tools of analysis in their studies including citation per publication, citation counts, impact factor, impact per publication, co-authorship and co-citation (Ahmi, & Mohd Nasir, 2019). Moreover, it is important to note that, bibliometric analysis in the taxation field has received little attention. The few ones available are reviewed in this study. For instance, Zhou et al. (2020) conducted a bibliometric analysis related to researches on supply chain management under carbon tax. Additionally, Zhang, Wang, Liang and Chen (2016) categorized the carbon tax literature from 1989 to 2014 using bibliometric analysis from Web of Science database. The result shows that USA ranked highest in the carbon tax field and Vrije University was the most active institution. Additionally, da Fonseca and Juca (2020) conducted a bibliometric analysis of the impact of taxes on foreign direct investment. The result shows that tax is a determinant for multinational companies investment decision. Furthermore, Nevzorova, Bobek, Kireenko and Sklyarov (2016) reviewed the literature relating to the problem of tax evasion using bibliometric analysis. The result indicates that the shadow economy and corruption are main contributors to tax evasion.

However, with the current availability and accessibility of data for educational publications, various analytical tools have been developed for bibliometric data analysis. More importantly, the pattern of

bibliometric analysis focused on visualising the bibliometric networks using VOSviewer software. Other analytical tools used to analyse the current research data will be discussed in the next section.

## **METHODS**

The current study obtained data from the Scopus database as at 22<sup>nd</sup> September 2020. The reason for selecting the Scopus database is its reputation as the “major single abstract and indexing database ever built” (Burnham, 2006). More so, is the leading searchable citations as well as abstract searching literature (Chadegani et al., 2013). Moreover, the selected results were retrieved from the collections of documents such as documents type, sources type, year of publications, authors names, access type, subject area, affiliations and language used. This study focused only on taxation publications in Malaysia in the Scopus database as highlighted earlier. It is based on the titles of the documents hence the following search keywords was applied (Title (Malaysia and Tax). The keywords were chosen because they provide the researcher with quick access to the published literature related to taxation in Malaysia on the Scopus database.

It is worthy of note that there are so many search key words in the Scopus database depending on the researcher’s preference. Such keywords includes Article Title, Abstract, Keywords, Authors, First Author, Source Title and Affiliation. In the case of this study, the author narrows the keywords to “Article Title, Abstract and Keywords” as mentioned above. Following the search keywords, a total of 88 documents were found. In view of the small number of documents found, the entire 88 documents were used for the analyses. Harzing Publish or Perish, Excel and VOS viewer software were used to analyse the results.

## **RESULTS**

The data generated from the Scopus database was analysed to identify sources type, documents type, subject area, keywords, author counts, top nine cited articles, most influential institutions, most influential papers, citations metrics and the most productive authors. Thus, most of the findings are displayed as frequency and percentage for easy interpretation. For year of publication, a cumulative percentage was

included to get the cumulative percentage of documents published each year.

## **Document and Source Types**

The data analyses begin with documents types and source types. This is important to enable the reader to identify the documents and source types published in Scopus within a given period. The documents type includes articles, conference papers, book chapters and review while source types includes journals, conference proceedings, books and book series. It is worthy of note that the conference papers that appeared in documents types are, however, different from those found in other source types (Sweileh et al., 2017). Thus, under the documents type, conference papers are collections of papers presented in conferences and eventually published in journals as articles. Moreover, some conference papers were also published in either book chapters or conference proceedings although the original document type is the conference paper (Ahmi, Elbardan, & Ali, 2019). As stated at the beginning of this section, this study found only four types of documents: articles, conference paper, book chapter and reviews.

Based on the result from Table 1, most of the publications were from articles, representing 80.68%, followed by conference papers with 12.59%. The smallest two types of document were book chapters and reviews with 5.68% and 1.14% respectively. However, Table 2 presents four source types. Journal has the highest percentage with 84%, followed by conferences proceedings with 10%. The two lowest contributions coincidentally with the same percentage are books and book series with 3 % and 2% each, respectively.

**Table 1**

### *Document Type*

<b>Document Type</b>	<b>Frequency</b>	<b>% (N=88)</b>
Article	71	80.68
Conference Paper	11	12.5
Book Chapter	5	5.68
Review	1	1.14
<b>Total</b>	<b>88</b>	<b>100</b>

**Table 2**

*Source Type*

Source Type	Frequency	% (N=88)
Journals	74	84.09
Conference Proceedings	9	10.23
Books	3	3.41
Book Series	2	2.27
<b>Total</b>	<b>88</b>	<b>100</b>

**Evolution of Published Studies**

The first taxation research in Malaysia was conducted in 1977 by Andic and published in a paper titled “Poverty and Tax Incidence in West Malaysia”. Afterwards, the level of publications witnessed a high rate of growth, especially from 2012 onwards as shown in Table 3 and Figure 1. Based on Table 3 and Figure 1, year 2017 has the highest number of publications since 2012 although it declined in 2018 and 2019, which are the most recent years. The decline might be due to low submissions of Malaysian tax publications in Scopus journals. Hopefully, 2020 will be better since most of the academicians are aiming to publish in Scopus-indexed journals nowadays.

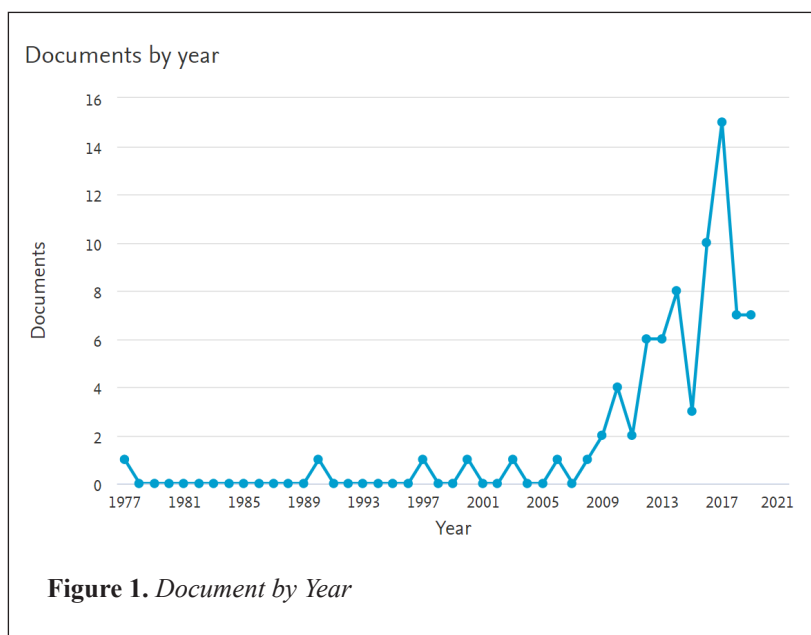
**Table 3**

*Year of Publications*

Year	Frequency	% (N=88)	Cumulative Percentage
1977	1	1.29	1.29
1990	1	1.29	2.59
1997	1	1.29	3.89
2000	1	1.29	5.19
2003	1	1.29	6.49
2006	1	1.29	7.79
2008	1	1.29	9.09
2009	2	2.59	11.68
2010	4	5.19	16.88
2011	2	2.59	19.48
2012	6	7.79	27.27

(continued)

Year	Frequency	% (N=88)	Cumulative Percentage
2013	6	7.79	35.06
2014	8	10.38	45.45
2015	3	3.89	49.35
2016	10	12.98	62.33
2017	15	19.48	81.81
2018	8	9.09	90.90
2019	8	9.09	90.90
2020	9	10.22	100
<b>Total</b>	<b>88</b>	<b>100</b>	



## Languages of Documents

The language found to be most frequently used to publish tax researches in Malaysia based on the search term “Malaysia and tax” in the Scopus database is English language. As shown in Table 4, 98.7% of the tax researches in Malaysia were published in English language. Only 1.3%, representing one publication out of 88 taxation research found in Scopus database, were published in Bahasa Melayu as at 23rd September 2020.



**Table 4**

*Languages Used for Publications*

<b>Language</b>	<b>Frequency</b>	<b>% (N= 88)</b>
<b>English</b>	87	98.70
<b>Malay</b>	1	1.29
<b>Total</b>	<b>88</b>	<b>100</b>

**Subject Area**

The report from the generated data provides subject areas covered by the published taxation researches in Malaysia from the Scopus database. Results from Table 5 indicated that most of the taxation studies in Malaysia are in the area of Business, Management and Accounting with about 37 publication equivalent to 23.5%. This is followed by Economics, Econometrics and Finance with a total of 35 publications amounting to 22.3%. The next area with high publications is Social Sciences with 26 publications equivalent to 16.6%. The fourth area with high publications is Computer Science with 14 publications equivalent to 9% of the total published papers related to taxation in Malaysia in the Scopus database.

**Table 5**

*Subject Area*

<b>Subject Area</b>	<b>Frequency</b>	<b>% (N=157)</b>
Agricultural and Biological Sciences	1	0.63
Arts and Humanities	4	2.54
Business, Management and Accounting	37	23.56
Computer Science	14	8.91
Decision Sciences	8	5.09
Economics, Econometrics and Finance	35	22.29
Energy	6	3.82
Engineering	8	5.09
Environmental Science	8	5.09
Mathematics	5	3.18
Medicine	2	1.27
Multidisciplinary	2	1.27
Pharmacology, Toxicology and Pharmaceutics	1	0.63
Social Sciences	26	16.56
<b>Total</b>	<b>157</b>	<b>100</b>

### **Most Active Source Titles with Minimum of Two Articles**

The result from the data extracted provided the most active source titles used by scholars to publish taxation-related researches in the Scopus database in the Malaysian context. Results from Table 6 show that “Advanced Science Letters” has the highest number of 5 published articles equivalent to 14% of the total 34 publications. This is followed by “International Journal of Supply Chain Management”, “International Review of Management and Marketing” and “Journal of Financial Crime” with three published articles respectively. The remaining Journals published only two articles each.

**Table 6**

#### *Most Active Source Title*

<b>Source Title</b>	<b>Frequency</b>	<b>% (N=34)</b>
Advanced Science Letters	5	14.70
International Journal of Supply Chain Management	3	8.82
International Review of Management and Marketing	3	8.82
Journal of Financial Crime	3	8.82
Asian Review of Accounting	2	5.88
Australian Journal of Basic and Applied Sciences	2	5.88
Ejournal Of Tax Research	2	5.88
International Journal of Economic Perspectives	2	5.88
International Journal of Economic Research	2	5.88
Isbeia 2012 IEEE Symposium on Business Engineering and Industrial Applications	2	5.88
Jurnal Ekonomi Malaysia	2	5.88
Jurnal Pengurusan	2	5.88
Pertanika Journal of Social Science and Humanities	2	5.88
Pertanika Journal of Social Sciences and Humanities	2	5.88
<b>Total</b>	<b>34</b>	<b>100</b>

## Keywords Analysis

This section presents author keywords in both table and visual forms. The author keywords were generated from VOSviewer software as pointed earlier in the introductory part of section three. VOSviewer is a software tool that aids in constructing and visualizing bibliometric networks (Aidi et al., 2019). Results from Figure 2 depicts a network visualization of authors' keywords. Thickness of connecting lines, square size and colour were used to depict the relationships with other keywords. For instance, keywords with the same colour were listed together. Based on Figure 2, for example, taxation, economic growth and tax revenue have a similar colour (green). Confirmation, goods and services tax and awareness have similar colour (red). This indicates that these groups of keywords are commonly used in one study. Results from Table 7 indicates that "Malaysia" was used frequently as keyword in these studies, because it has the highest percentage of 33% approximately, followed by "Taxation" with 16.5 respectively.

**Table 7**

### *Top Keywords*

Keywords	Frequency	% (N=85)
Malaysia	28	32.94
Taxation	14	16.47
Awareness	5	5.88
Economics	5	5.88
Tax Compliance	5	5.88
Attitude	4	4.70
Corporate Governance	4	4.70
Goods and Services Tax	4	4.70
Income Tax	4	4.70
Tax Evasion	4	4.70
Tax Knowledge	4	4.70
Tax Revenue	4	4.70
<b>Total</b>	<b>85</b>	<b>100</b>

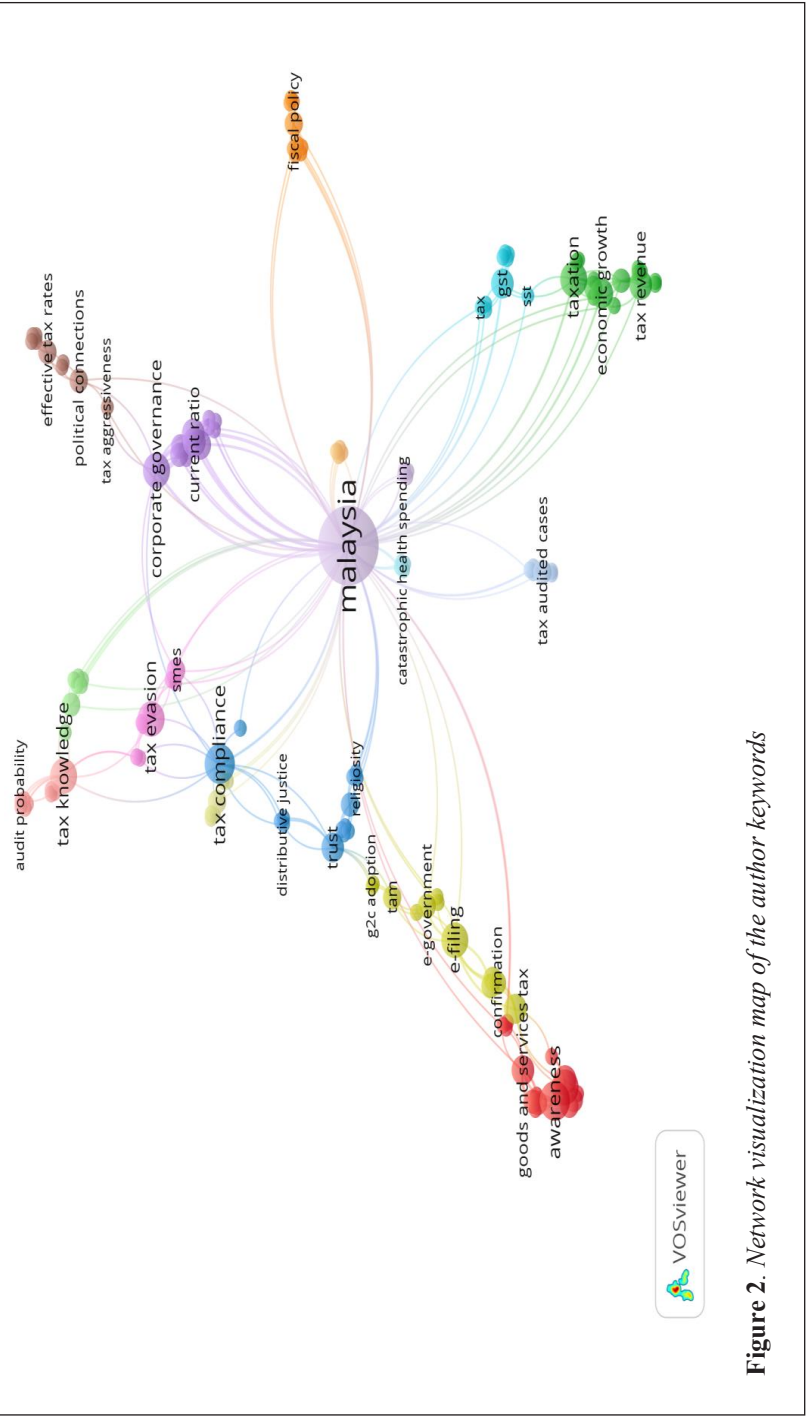


Figure 2. Network visualization map of the author keywords

## Authorship

Table 8 presents authors' relationships with the published documents. These include the number of authors as well as the number of documents published by those authors from 1977 to 2020. The table present the level of collaboration by some group of authors to published certain numbers of documents as well as the number of single authors published documents. For example, a total of three authors published 56 documents together representing 30.10% of the total 88 documents. Additionally, a total of two authors jointly published 38 documents representing 20.43% of the total 88 documents while a total of nine documents were published by single authors representing 4.83%.

**Table 8**

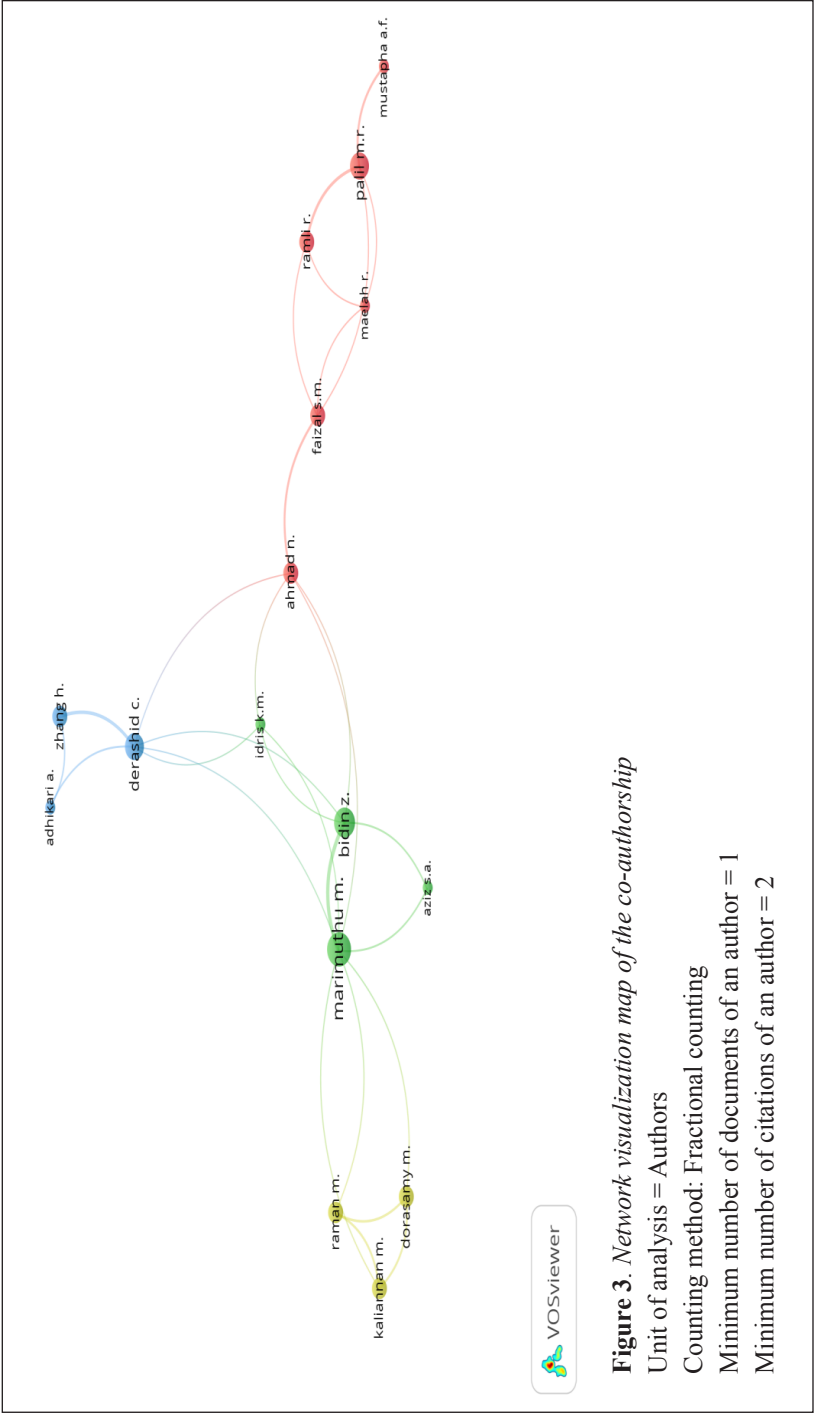
*Number of Authors Per Documents*

Author Count	Frequency	% (N=186)
3	56	30.10
2	38	20.43
2	31	16.66
1	9	4.83
2	6	3.22
1	5	2.68
3	4	2.15
4	3	1.61
2	3	1.61
3	3	1.61
1	3	1.61
1	3	1.61
2	2	1.07
2	2	1.07
2	2	1.07
2	3	1.61
4	2	1.07
4	1	0.53
3	1	0.53
4	1	0.53
3	1	0.53
3	1	0.53

(continued)

<b>Author Count</b>	<b>Frequency</b>	<b>% (N=186)</b>
3	1	0.53
3	1	0.53
3	1	0.53
4	1	0.53
2	1	0.53
2	1	0.53
	<b>186</b>	<b>100</b>

Figure 3 below presents network visualization of co-authorship using fractional counting based on a minimum of one document per author and at least minimum of two citations per author. Fractional counting is a calculation made by the VOSviewer software based on the user instructions. This analysis indicates scholar's co-authorship with minimum number of one document and two citations. It means any co-authorship with less than two citations are fractionally excluded by the software. The result is presented in colour and thickness line, which shows some clusters of authors with co-authorship. For instance, the red colour portrayed number of co-authorship with at least one number of documents and two citations. The yellow colour indicates co-authorship with at least two number of documents and two citations. The blue color also portrayed co-authorship with at least three number of documants and more than two citations. The green color depicts co-authorship with more than three documents and more than two citations.



## Text Analysis

Figure 4 below presents visualization of the co-occurrence network based on title and abstract fields (Full Counting). This analysis shows the most frequently used words in the title and abstracts of the selected documents based on Full Counting. Full Counting is done by the VOSviewer software based on user instruction. The coloured line interwoven between one cluster and another indicates the interconnections of the words in the titles and abstracts of the selected documents.

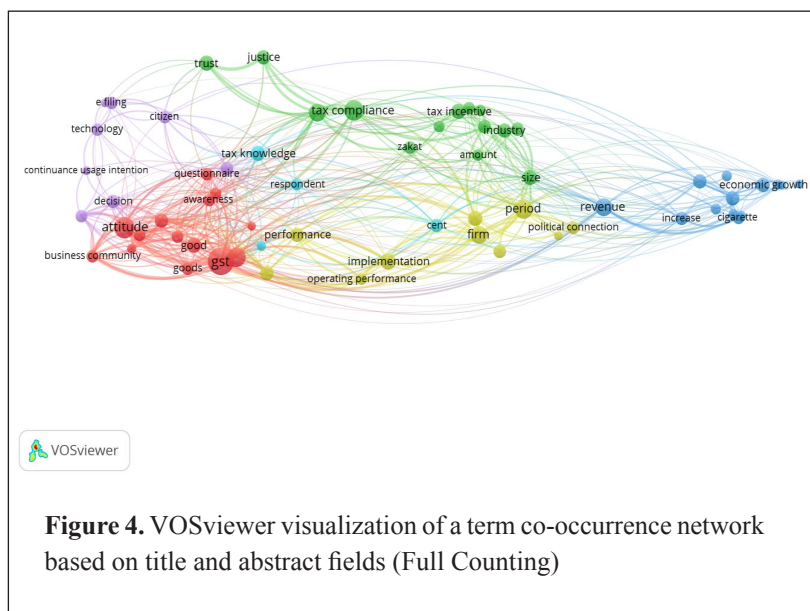
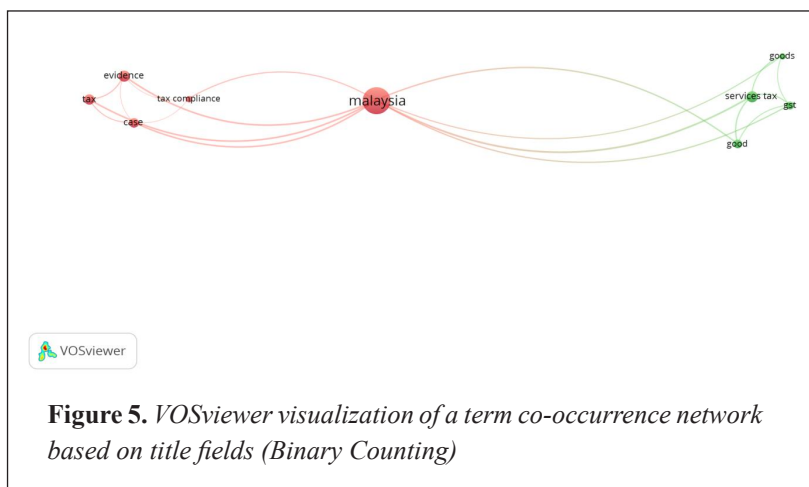


Figure 5 below shows the visualization of a term co-occurrence network based on title fields (Binary Counting). Binary Counting is usually performed by the VOSviewer software based on the user instruction. The interwoven colored lines between the three clusters highlights the network of some words which were frequently used in the titles of the selected documents.





## Most Influential Institutions

This section presents the frequencies and the percentage of the most influential institutions with at least two taxation related publications in the Malaysian context and published in the Scopus database. Based on Table 9, Universiti Teknologi MARA has the highest publications related to taxation in the Malaysian context published in the Scopus database with 20 publications equivalent to 22.73% out of 88 publications selected. This is followed by Universiti Utara Malaysia with 14 publications and Universiti Malaya with 9 publications. The institutions with lowest publications are University of Leeds, Monash University, Vilniaus Gedimino Technikos Universitetas, Universiti Tunku Abdul Rahman and Leeds University Business School with two publications each.

**Table 9**

*Most Influential Institutions with Minimum of Two Publications*

Institutions	Frequency	% (N=88)
Universiti Teknologi MARA	20	22.73
Universiti Utara Malaysia	14	15.90
University of Malaya	9	10.23
Universiti Putra Malaysia	7	7.95

(continued)

<b>Institutions</b>	<b>Frequency</b>	<b>% (N=88)</b>
International Islamic University Malaysia	7	7.95
Universiti Sains Malaysia	6	6.82
Universiti Kebangsaan Malaysia	5	5.68
Universiti Teknologi Malaysia	5	5.68
Universiti Malaysia Terengganu	5	5.68
Universiti Sultan Zainal Abidin	5	5.68
Universiti Teknologi Malaysia, Kuala Lumpur	4	4.55
Multimedia University	3	3.41
University of Leeds	2	2.27
Monash University	2	2.27
University of Indonesia	2	2.27
Vilniaus Gedimino Technikos Universitetas	2	2.27
Universiti Tunku Abdul Rahman	2	2.27
Leeds University Business School	2	2.27
<b>Total</b>	<b>102</b>	<b>100</b>

## **Citation Analysis**

This study used the Harzing's Publish or Perish software to obtain the citation metrics of the retrieved documents. The data generated from the Scopus database was imported into the software to generate the citation metrics together with the total citations of each document. Table 10 provide a summary of the citation metrics for the document as at 19<sup>th</sup> January 2020. The summary comprises of the publication years which started from 1977-2019, the total citations of the entire documents between 1977-2019, number of papers published within the period, citations years, citations per year, citations per paper, authors per paper, h-index, g-index, h-normal and h-annual.

**Table 10**

### *Citations Metrics*

<b>Metrics</b>	<b>Data</b>
Publication years	1977-2020
Citation years	43 (1977-2020)
Papers	88

(continued)

<b>Metrics</b>	<b>Data</b>
Citations	535
Citations/year	12.44
Citations/paper	6.08
Authors/paper	3.24
h-index	9
g-index	22
hi norm	6
hi annual	0.14

Nine most influential articles related to taxation in the Malaysian context published in the Scopus database are presented in Table 11. The article with the highest citation entitled “Public policy, political connections, and effective tax rates: Longitudinal evidence from Malaysia” by Adhikari, Derashid and Zhang (2006) received a total of 187 citations as at 23<sup>rd</sup> September 2020 with 13.36 citations per year, followed by Malpezzi and Mayo (1997) with 82 total citations and 3.57 citations per year followed by the remaining seven publications.

**Table 11**

*Highly Cited Articles – Nine (9) Most Influential Papers*

<b>No.</b>	<b>Authors</b>	<b>Article Title</b>	<b>Year</b>	<b>Cites</b>	<b>Cites per Year</b>
1	A. Adhikari, C. Derashid, H. Zhang	Public policy, political connections, and effective tax rates: Longitudinal evidence from Malaysia	2006	187	13.36
2	S. Malpezzi, S.K. Mayo	Getting housing incentives right: A case study of the effects of regulation, taxes, and subsidies on housing supply in Malaysia	1997	82	3.57
3	C. Derashid, H. Zhang	Effective tax rates and the “industrial policy” hypothesis: Evidence from Malaysia	2003	68	4.00
4	R. Hussein, N. Mohamed, A.R. Ahlan, M. Mahmud, U. Aditiawarman	An integrated model on online tax adoption in Malaysia	2010	17	1.70

(continued)

No.	Authors	Article Title	Year	Cites	Cites per Year
5	T. Santhanamery, T. Ramayah	Explaining the e-Government usage using expectation confirmation model: The case of electronic tax filing in Malaysia	2014	17	2
6	N.A. Mohd Yusof, L.M. Ling, Y.B. Wah	Tax non-compliance among SMCs in Malaysia: Tax audit evidence	2014	17	2.83
7	M. Dorasamy, M. Marimuthu, M. Raman, M. Kaliannan	E-government services online: An exploratory study on tax e-filing in malaysia	2010	13	1.30
8	S. Narayanan	The impact of the goods and services tax (GST) in Malaysia: Lessons from experiences elsewhere (A Note)	2014	9	1.50
9	E.A.A. Wahab, A.M. Ariff, M.M. Marzuki, Z.M. Sanusi	Political connections, corporate governance, and tax aggressiveness in Malaysia	2017	16	5.33

## DISCUSSION/CONCLUSIONS

The aim of this study is to review the trend and frequencies of published literatures on taxation in Malaysia based on the Scopus database. The study found 88 documents as at 23rd September 2020 from the Scopus database using a defined search keywords as pointed earlier. The results from the analysed data includes document types, source types, year of publications, language of documents, subject area, most active source titles, keywords analyses, authorship analysis, text analysis, most influential institutions and citation analysis (Scopus Database, 2020). Findings from the document types indicated that most of the Malaysian taxation research published in Scopus database from 1977 to 2020 using the search term “Malaysia and tax” were published as articles which is equivalent to 79% of the total 88 documents found by the current study. This is followed by conference papers with 14% and 5.1%, 1.2% for book chapters and reviews respectively.

This indicated that most of the scholars prefer to publish articles than conference papers, book chapters or reviews. One of the possible

reasons for this might be due to benefit of articles especially for achieving academic key performance indicators (Cohen, 2007). Additional reasons could be that for over 16 years back there is calls for the need to migrate from solely books publications by publishers to article publications in a journal which was tagged journal evolution (Daft, & Lewin, 2008). The results on source type from Table 2 indicated that most of the scholars prefer to publish their work in journals instead of conference proceedings, books or book series. The results show that about 84% of the documents extracted were published in journals, followed by conference proceedings with 10.23%, and 3.41% and 2.27% each for books and book series respectively. The reasons could be the same as mentioned under document type. The results related to the document published per year revealed that 2017 received the highest publications of the documents extracted from the Scopus database with 19.48% followed by 2016 with 12.98%. Unfortunately, the publication rate dropped to 9% each in 2018 and 2019 respectively. This finding can serve as a wake-up calls for tax researchers in Malaysia to do more in this domain.

The result from Table 4 on languages of documents shows that English language was used for publishing about 98.7% of the documents extracted from Scopus database for the purpose of this study, while Bahasa Melayu account for only 1.7%. Some of the possible reasons for this could be that the majority of the source type such as journals, conference proceedings, books and book series prefer to publish documents in English language because of its wide readership (Ho, 2007). Publications in Bahasa Melayu are mainly for domestic consumption. Results from Table 5 provides evidence of the subject area related to taxation research in Malaysia published in the Scopus database. From the results, it was highlighted that most of the subject area covered are Business, Management and Accounting with 23.56%, followed by Economics, Econometrics and Finance with 22.29%, and the third area was Computer Science with 8.91%. The least was Pharmacology, Toxicology and Pharmaceutics as well as Agricultural and Biological Sciences with 0.63% each. The result shows that tax researchers in Malaysia still need to publish more in the areas of Agricultural and Biological Science, Arts and Humanities, Decision Sciences, Energy, Engineering and Environmental Science. This is because the results from Table 5 shows that these areas received relatively low publications. Hence, more publications are needed in these areas.

Finding from Table 6 concerning the most active source titles show that Advance Science Letters has the highest number of published articles with 14.71% while the remaining journals have 8% and 5% respectively. The findings indicate that researchers can explore other journals with little number of publications, as chances of publications will be more in those journals than journals with much number of publications. The justification for this assertion could be that, getting acceptance in a journal with high volume of paper submissions in a given issue would be low than in a journal with low paper submissions. Results from Table 7 and Figure 2 present the most used keywords from the selected documents. Based on the results, “Malaysia” has the highest frequency of 28 appearances, which is equivalent to 32.94% of the total 88 selected documents. Additionally, based on VOSviewer visualised result, there are about nine clusters which shows the inter-connections of one author keywords with others (Sweileh et al., 2017). From the Figure 2 the thickness of the connecting lines, square size and colour were used to depict the relationships with other keywords. More so, keywords with the same colour were listed together. For example, taxation, economic growth and tax revenue have a similar colour (green). Confirmation, goods and services tax and awareness have similar colour (red). This indicates that these groups of keywords are commonly used in one study, the same scenario applies to the remaining clusters. Therefore, Malaysia, corporate governance, current ratio, goods and services tax, awareness, tax compliance, trust, religiosity, tax evasions, tax knowledge, e-governance and e-filing are the most encountered author keywords in the selected documents.

Finding from Table 8 presents number of authors per selected documents in this study. These include the number of authors as well as the number of documents published by those authors. Based on the result, about four authors have 9, 5, 3, and 3 publications as single authors, while the remaining are grouped into 2,3,4 and 5 to publish jointly. Additionally, this study examined collaboration of authors using VOSviewer. The results from Figure 3 presents series of authors collaboration using different colours and thick lines appearing from one cluster to another. The authors were selected with minimum number of one document and two citations per authors. The finding depicts the pattern of collaborations amongst some selected authors, for instance, Marimuthu, Bidin, and Aziz are considered as the most collaborating authors with green (colour). The red colour portrayed

number of co-authorship with at least one number of documents and two citations. The yellow colour indicates co-authorship with at least two number of documents and two citations. The blue colour also portrayed the co-authorship with at least three number of documents and more than two citations. The green colour depicts the co-autoship with more than three number of documents and more than two citations. Hence, the results portrayed the most collaborating scholars related to taxation field in Malaysia as found in Scopus database. Therefore, the finding can help potential scholars in this domain to find the most suitable and experienced scholars to collaborate with in future research.

Figure 4 presents VOSviewer visualization of a term co-occurrence network with a minimum number of 10 co-occurrence of a term based on title and abstract fields (Full Counting) of the documents extracted from the Scopus database. As depicted in Figure 4, “GST” is the main term presented as the central nodes of the entire network (Verk, Golog and Podar, 2019) in Malaysian taxation research based on Scopus database. Hence, the size of the nodes displays the weight of the co-occurrence of the terms and the thick lines jointly show the strength of interconnections between the terms. Most of the words that are related are indicated by the same colour and it shows that they frequently co-occurred together.

To buttress this point, for instance, the figure suggests that trust, justice, tax compliance, tax incentive, industry, zakat, amount and size are closely related and virtually occurred together. The same applies to other clusters in the same figure. Thus these findings suggest the most words that occurred together in Malaysian tax research. The finding will help researchers to search for documents related to their topics using some of the keywords that occurred together. This will save researchers time when searching for relevant documents for their research.

Figure 5 presents the visualization of a term co-occurrence network based on title fields using ten co-occurrences of term from the VOSviewer software. This study used binary counting to construct the co-occurrence network. Binary counting approach refers to the number of times a noun phrase occurs in the title field of a publication (Van, Eck, & Waltman, 2014). Put differently, a noun

phrase that appears only once in the title field of a publications is, however, treated in the same way as a noun phrase that occurred ten times (Van et al., 2014). As depicted in Figure 5, “Malaysia” is the main term presented as the central nodes of the entire network (Verk, Golog and Podar, 2019) in Malaysian taxation research based on the Scopus database. For instance, the figure suggests that Malaysia, tax compliance, evidence, tax and case are closely related and virtually occurred together in most of the titles of the selected documents. This finding will be of help to the researchers when searching for relevant keywords regarding published documents on Malaysia/taxation especially in the Scopus database. Table 9 present the most influential institutions with minimum of two publications. Based on the result from Table 9, it appears that Universiti Teknologi MARA has the highest published documents based on search term “Malaysia and taxation” in the Scopus database with 18.18% followed by Universiti Utara Malaysia with 15.91% and University Malaya came third with 9.1%. The finding shows the leading institutions in taxation-related publications found in the Scopus database. This will help institutions with low publications to encourage their academic staff and students to publish more in the Scopus database as this will increase their ranking.

Table 10 presented citation analysis and the study used Harzing’s Publish or Perish software to obtain the citation metrics from the retrieved data. Based on the result, it was found that the publications covered 43 years from 1977-2020 with a total of 535 citations of the entire 88 documents. The result show that on average, the documents were cited 12.44 times per year. Therefore, this study conclude that the citations can be considered as moderate considering the number of years (43) including the current year 2020 and the small number of the documents (88) over this period. Table 11 present the nine (9) most cited articles based on the number of citations per documents. As pointed earlier, one single article had 187 citations and 13.36 citations per year. The results revealed the most cited authors and documents. The implication of this finding is that the documents with high number of citations can serve as a reference point for other researchers. They can emulate the approach, focus, the structure and design of the paper when making future publications in order to get more citations on their publications which would in turn increase their academic status. Secondly it will help other researchers to select authors for future research collaborations.



More often than not, the findings of this study are in agreement with prior published bibliometric literatures on taxation (Nevzorova et al., 2016; Zhang et al., 2016; de Fonseca & Juca, 2020; Zhou et al., 2020). Consequently, having discussed the findings of this study, it is important to highlight the significance of bibliometric analysis in academic domain. Bibliometric analysis has the potentials and capability to evaluate the productivity of research and publications in a specific research area (Luwei & Nederhof, 2002). Additionally, the findings from bibliometric analysis can assist research funders to evaluate the performance of a particular research in specific area for future policy related decisions as well as comparing the scientific input and output of a potential research area (Gu, 2004). Additionally, bibliometric results can describe possible factors that supports the contributions of studies in a given research domain and possibly guide scholars in making useful research (Akhavan et al., 2016). Towards this end, this study offers several contributions to Malaysian researchers in the field of taxation and potential tax research funders, Inland Revenue Board of Malaysia and the Malaysian government. From the academic viewpoint, this study would assist them in identifying the areas so far covered on taxation in the Malaysian context in order to focus more on the new areas. Secondly, the findings will assist Malaysian researchers in this field to identify the most productive authors for future collaborations. Malaysian research funders in the field of taxation may be interested in this study because it presented the most productive research areas and published documents which is the main target of research funders as this will help them in future policy decisions. From the tax administration point of view, this finding will assist the Inland Revenue Board in identifying potential research area and potential authors to collaborate in conducting future tax research projects in Malaysia. From the government perspective, this study will assist them to identify the most productive institutions for future funding decisions and policy formulation. Nonetheless, despite the aforementioned potential contributions of this study, it has some limitations. For instance, the results emanated from one single database (Scopus) even though there are several databases out there. Therefore, other databases were not covered by this study. Hence, future research can cover other databases to enable wider generalizations of the results. Secondly, the search query was limited to a specific keyword “Malaysia taxation” based on the title, abstract and keywords of the documents.

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